# Service Manua TAPE RECORDER PANASONIC



# **DOLBY SYSTEM** CASSETTE DECK



**RS-263US MECHANISM SERIES** 

# MODEL RS-263US

#### **SPECIFICATIONS**

Power Source:

AC: 90~109, 110~125, 200~219,

220~250 volts, 50/60 Hz

Power Consumption:

Approx. 12 W

Motor:

Electronic speed control motor

Transistors:

2SC1327(4) 2SC828(18)

2SC1347(3) 2SA564(2) 2SK37(2) OA90(4) 1S1850(3) RD7A(2)

1S1211(6)

Operation:

Diodes:

Push-button controls with auto-stop

mechanism

Recording System: Erase System:

AC bias 80 kHz

Track System:

AC erase

4-track, 2-channel stereo recording

and playback

Tape Speed: Wow and Flutter: 1-7/8 ips.

Tabe:

Less than 0.20%

Cassette tape

Frequency Response:

 $30\sim13,000$  Hz (with normal ape)

30~14,000 Hz (with CrO2 taxe)

Signal to Noise Ratio: Better than 45 dB (in normal peration)

Better than 55 dB (in Dolby operation) 2-MIC  $-70 \text{ dB } (0.3 \text{ mV})/600 -20 \text{ K}\Omega$ 

2-LINE  $-30 \, dB \, (30 \, mV)/150 \kappa \Omega$ 

2-LINE  $-6 \, dB \, (500 \, mV)/load$ 

impedance 50K  $\Omega$  over

1-HEADPHONE 8Ω

Fast Forward and

Rewind Time: Approx. 100 seconds with C-60

cassette tape

Program Time:

1 hour stereo recording with 0-60

cassette tape

Dimensions: Weight:

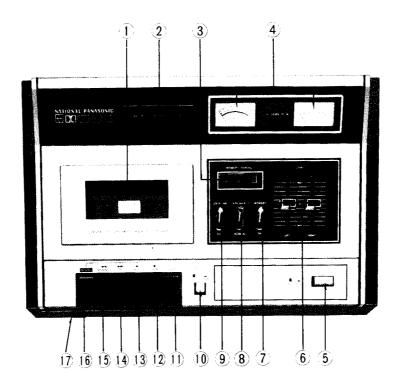
Inputs:

Outputs:

 $14-3/4''(W) \times 4-5/8''(H) \times 9-1/2''(D)$ 

These specifications are subject to change in order to accommodate improvements in design.

# **LOCATION OF PARTS**



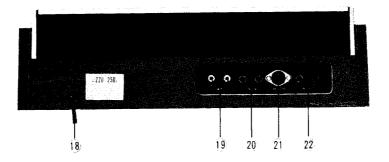


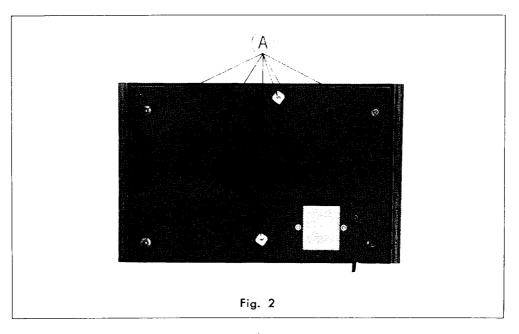
Fig. 1

- Cassette cover
- ② Operation indicators
- 3 Tape counter
- 4 Level meters
- ⑤ Power switch
- Level adjustment controls
- Memory rewind switch
- Tape selector switch
- Dolby switch
- 10 Pause button
- Eject button

- Stop button
- (3) Playback button
- Fast forward button
- (5) Rewind button
- ® Record button
- 1 Headphone jack
- (8) Power cord
- Microphone jacks
- 20 Line in jacks
- Recording/playback connector
- 2 Line out jacks

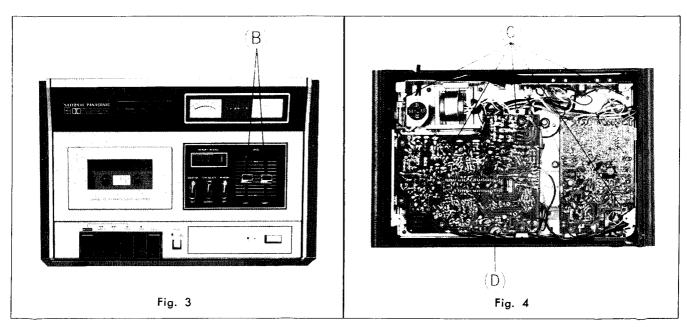
# **DISASSEMBLY INSTRUCTIONS**

# **HOW TO REMOVE BOTTOM BOARD**



- 1. Remove 6 bottom board holding screws (A).
- 2. Then bottom board can be removed.

#### **HOW TO REMOVE CHASSIS**



1. Pull out 2 volume knobs (B).

- 2. Remove 5 chassis holding screws (C) and 1  $\mbox{\it nassis}$  holding pole (D).
- 3. Then chassis can be removed.

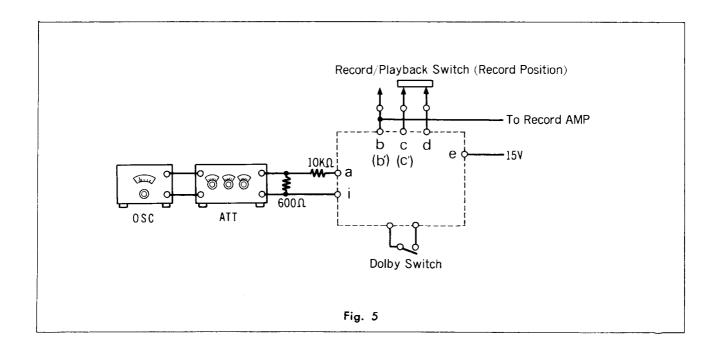
# STANDARD VALUE TO TEST

	ITEM	VALUE	PARTS TO BE ADJUSTED	REMARK
1	Recording bias current.	0.55±0.1 mA	L5 (for CH1) L6 (for CH2)	Level control VR should be minimum.
2	Bias oscillation frequency.	80±5 kHz		
3	Recording level.	1 kHz  MIC -73±3 dB  LINE IN -30±4 dB  DIN -73±4 dB	VR7 (for CH1) VR8 (for CH2)	To obtain 45µA of recording current through the recording head. Tape select switch should be on NORMAL position. Stop the bias oscillation by unsoldering the wire (A) as shown on printed circuit board (Page 8). Level control VR should be maximum.
4	Erase current.	70 mA		
5	Recording level indicator.	0 VU on VU meter.	VR9 (for CH1) VR10 (for CH2)	At 0.5 V of Line output.
6	Playback amplifier gain.	−79±30 dB	VR3 (for CH1) VR4 (for CH2)	Level control VR should be maximum.
7	Playback equalizer.	333 Hz: 0 dB 6.3 kHz:0.5 dB	VR1 (for CH1) VR2 (for CH2)	Playback the DIN standard tape (C-FE). If gain is not with in standard at 6.3 kHz adjust with VR1 and VR2.
8	Pressure of pressure roller.	400±50 gr		The value is indicated when the pressure roller comes off from capstan.
9	Takeup tension.	55±10 gr		Clean up the oil and dust adhring to the takeup reel table and takeup idler.
10	Detecting piece tension.	50±10 gr		

# **DOLBY CIRCUIT ADJUSTMENT**

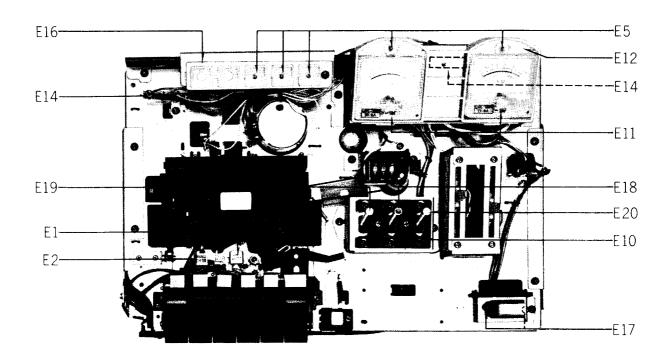
The connection is shown in Fig. 5.

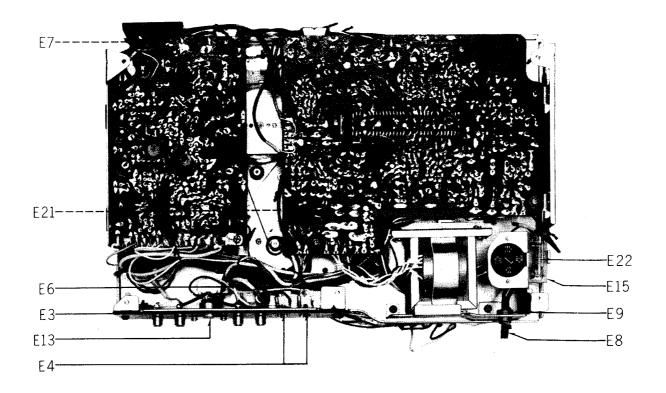
- 1. Place the set into the recording mode, set the Dolby\*NR switch to OUT and supply input so that output of TPC (for CH1) and TPC' (for CH2) becomes 3 mV.
- 2. Set VR101 (for CH1) and VR103 (for CH2) to MAXIMUM (by turning them fully clockwise as seen from the reverse side of the printed circuit board).
- 3. Set the Dolby NR switch to IN.
- 4. Adjusting VR102 (for CH1) and VR104 (for CH2), make the reading of VTVM at TPb (for CH1) and TPb' (for CH2) become 10 dB greater than 3 mV (frequency: 5 kHz).
- 5. Adjusting VR101 (for CH1) and VR103 (for CH2), make the reading of VTVM at TPb (for CH1) and TPb' (for CH2) become 2 dB smaller than the value obtained through the adjustment in 4 above (frequency: 5 kHz).



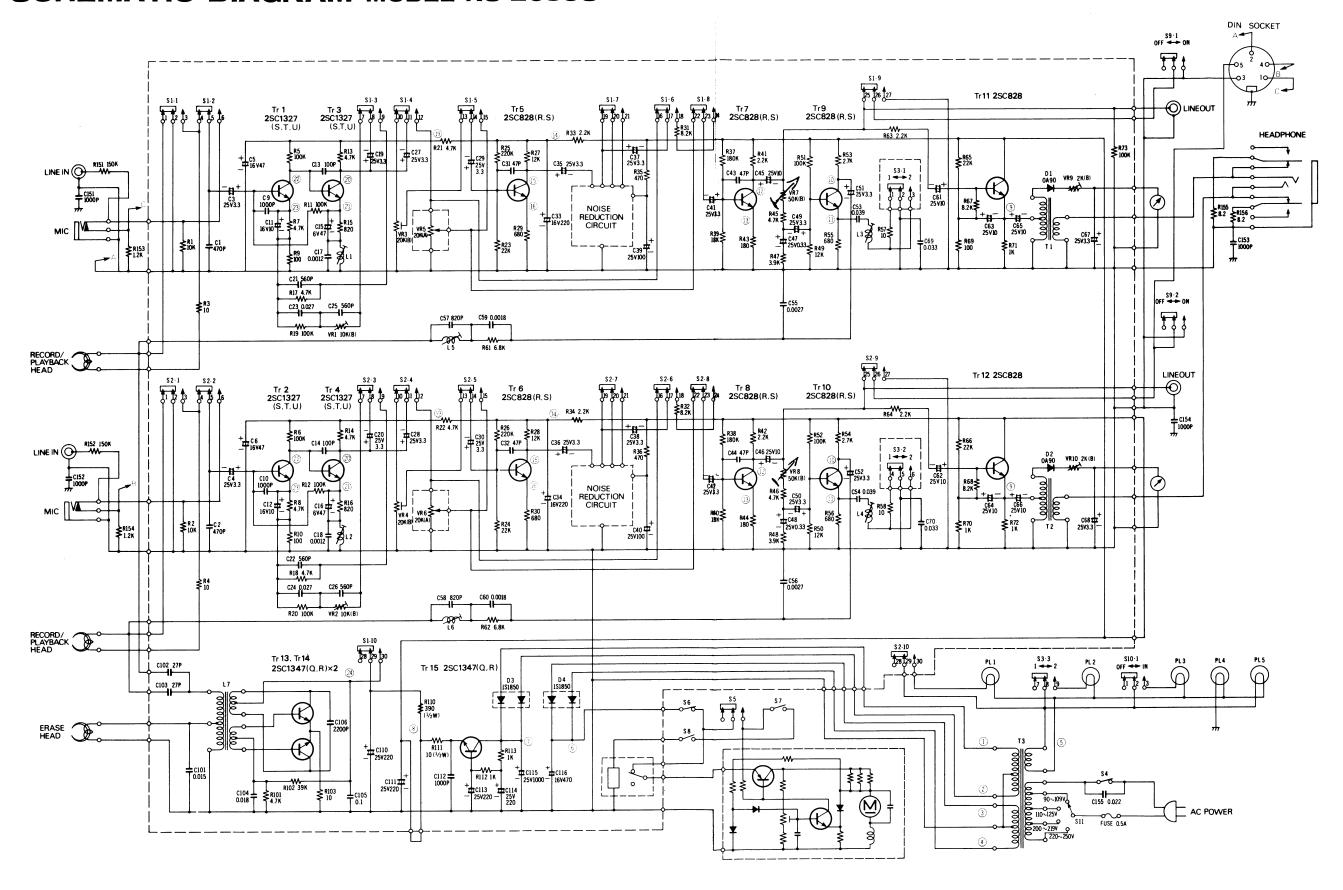
<sup>\*</sup> Dolby is the trade mark of Dolby Laboratories Inc.

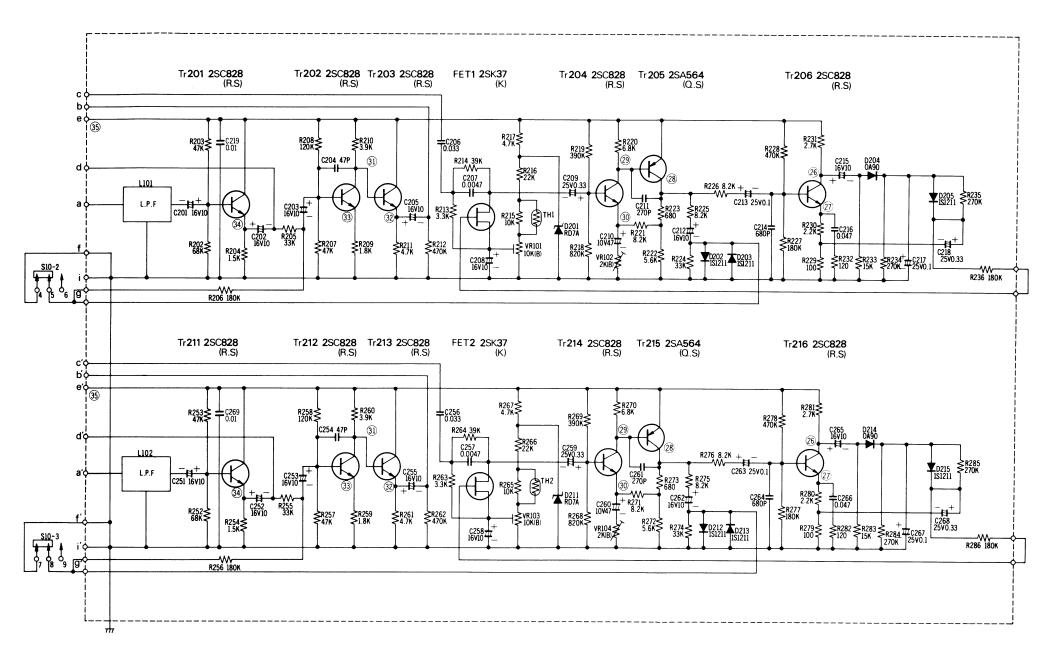
# **ELECTRICAL PARTS LOCATION**





# SCHEMATIC DIAGRAM MODEL RS-263US





#### STANDARD VOLTAGE CHART

Check Point	Recording	Playback	Check Point	Recording	Playback
<b>①</b>	AC 18.6V	AC 18.9V	(19)	+ 9.9V	+10.0V
2	AC 18.6V	AC 18.9V	20	+4.7V	+ 5.0V
3	AC 8.1V	AC 8.2V	21	+0.9V	+0.91V
4)	AC 8.1V	AC 8.2V	22	+1.45V	+1.55V
5	AC 10.2V	AC 10.4V	23	+0.37V	+0.39V
6	+8.9V	+9.0 <b>V</b>	24	+12.6V	
Đ	+23.1V	+23.6V	26	+10.8V	+11.2V
8	+19.7V	+20.6V	27	+2.6V	+ 2.7V
9	+14.0V	+14.8V	28	+8.9V	+ 9.4V
10	+10.4V	+11.0V	29	+13.2V	+13.9V
Œ	+ 3.2V	+ <b>3.4V</b>	30	+8.8V	+9.3V
12	+ 9.4V	+ 9.5 <b>V</b>	31	+ 7.4V	+ 7.6V
13	+0.88V	+ 0.95V	32)	+ <b>6.7V</b>	+7.0 <b>V</b>
14	+15.0V	+ 15.5V	33	+ 3.0V	+3.1V
15	+ <b>5.4V</b>	+ 5.4V	34	+ 7.1V	+ 7.5V
16	+ 6.3V	+0.7V	35	+13.6V	+14.2V

NOTE: All measurements are under no signal conditions with volume at minimum position.

Use VTVM for voltage measurements.

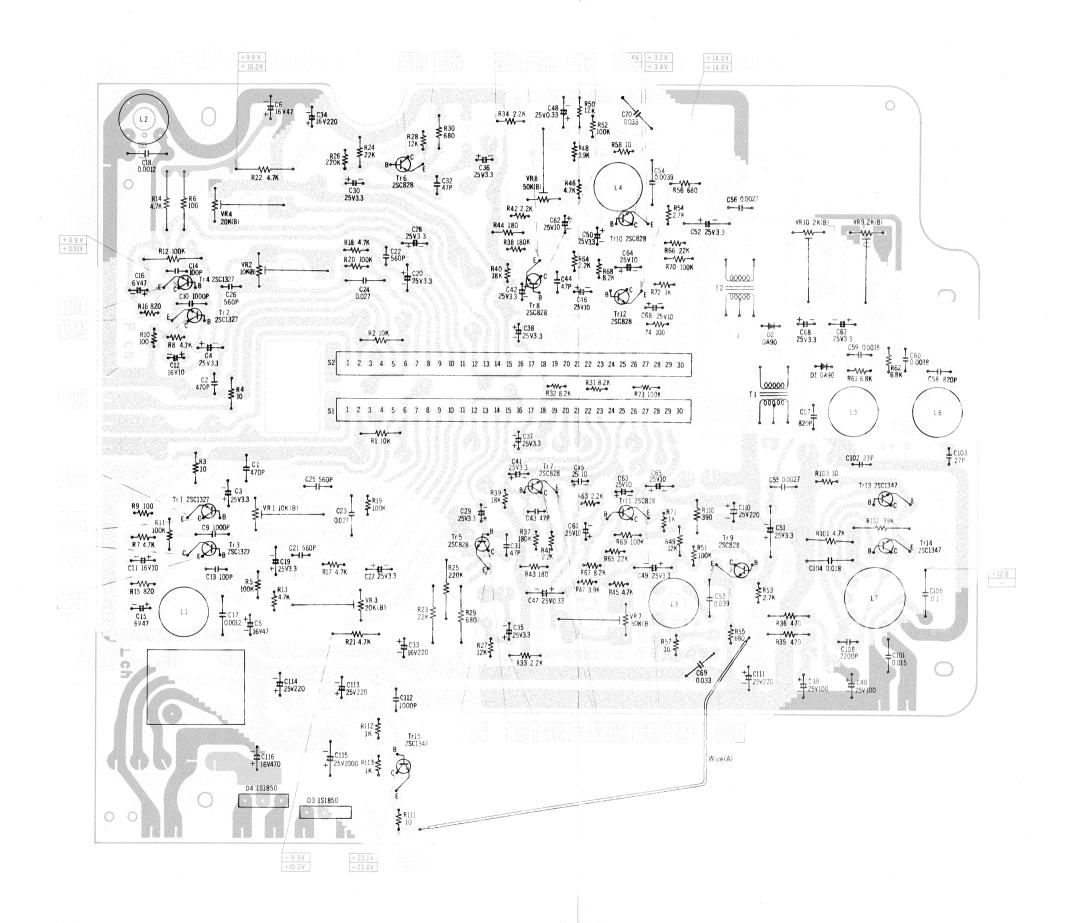
#### NOTE:

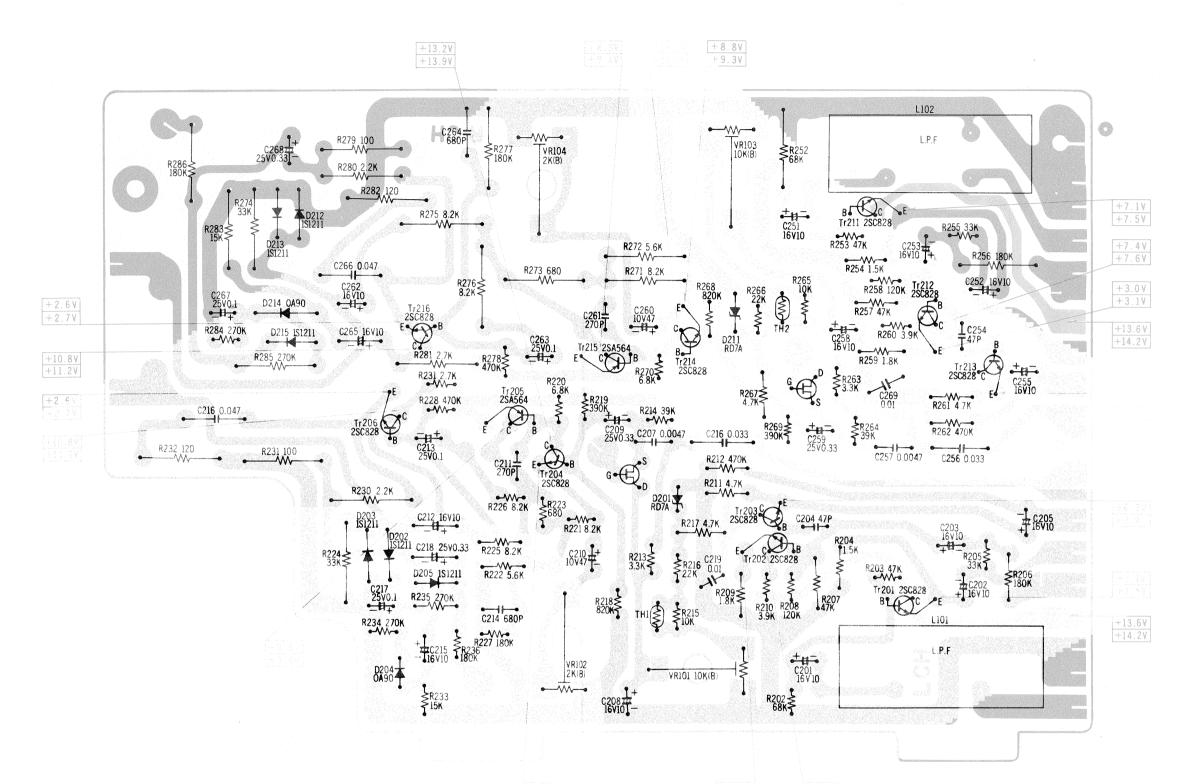
110	OIE.	
1.		ord/playback select switch (shown in playbaition).
2.	2. \$3-1~\$3-3 Tap	e select switch (shown in NORMAL position). NORMAL, 2CrO2
3.		ver ON/OFF switch (shown in ON position).
4.	4. S5 Mer	nory rewind ON/OFF switch (shown in OFF ition).
5.	5. S6 Mot	or ON/OFF switch (shown in ON position).
6.	5. S7 Rew	rind switch (ON at rewind position).
7.	7. S8 Cou	nter switch.
8.	3. S9-1, S9-2 Stop	switch (OFF at playback position).
9.	9. S10-1~S10-3Nois	e reduction circuit IN/OUT switch (DOLBY em, shown in OUT position).
10.	D. S11, Volt	
	l. VR1, VR2Play	
12.	2. VR3, VR4Play	back adjustment VR.
	3. VR5, VR6Volu	me control (record and playback level
14.	l. VR7, VR8 Reco	ord level adjustment VR.
15.	5. VR9, VR10 VU r	neter adjustment VR.
16.	5. VR101~VR104 Nois	e reduction circuit adjustment.
	'. Resistors are ohms ( $\Omega$ ), 1/4 watt K=1,000 $\Omega$ .	
18.	3. Capacitors are microfarad ( $\mu$ F) unl	ess specified otherwise

18. Capacitors are microfarad ( $\mu {\rm F}$ ) unless specified otherwise P=Pico-farads.

19. Encircled numbers ( ) show the checkpoints for voltage. The values are marked in the standard voltage chart.

# **CIRCUIT BOARD**



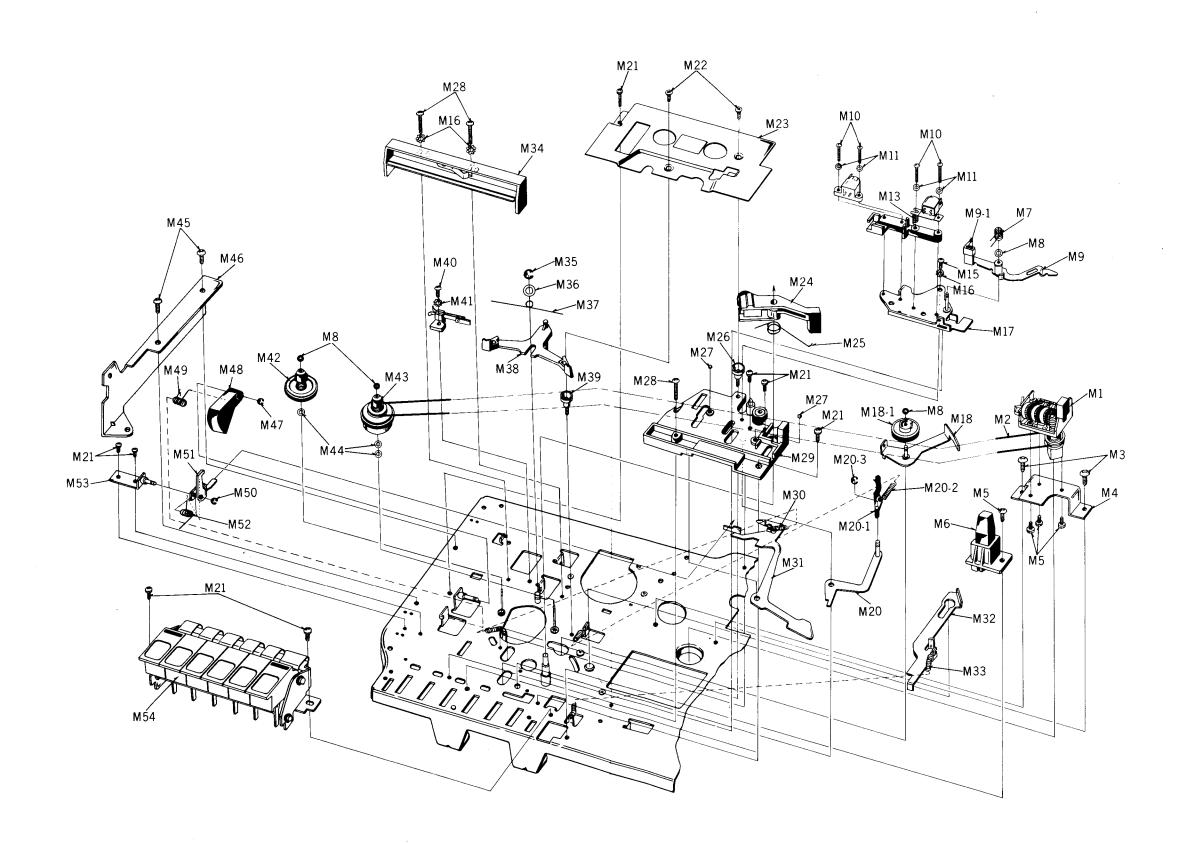


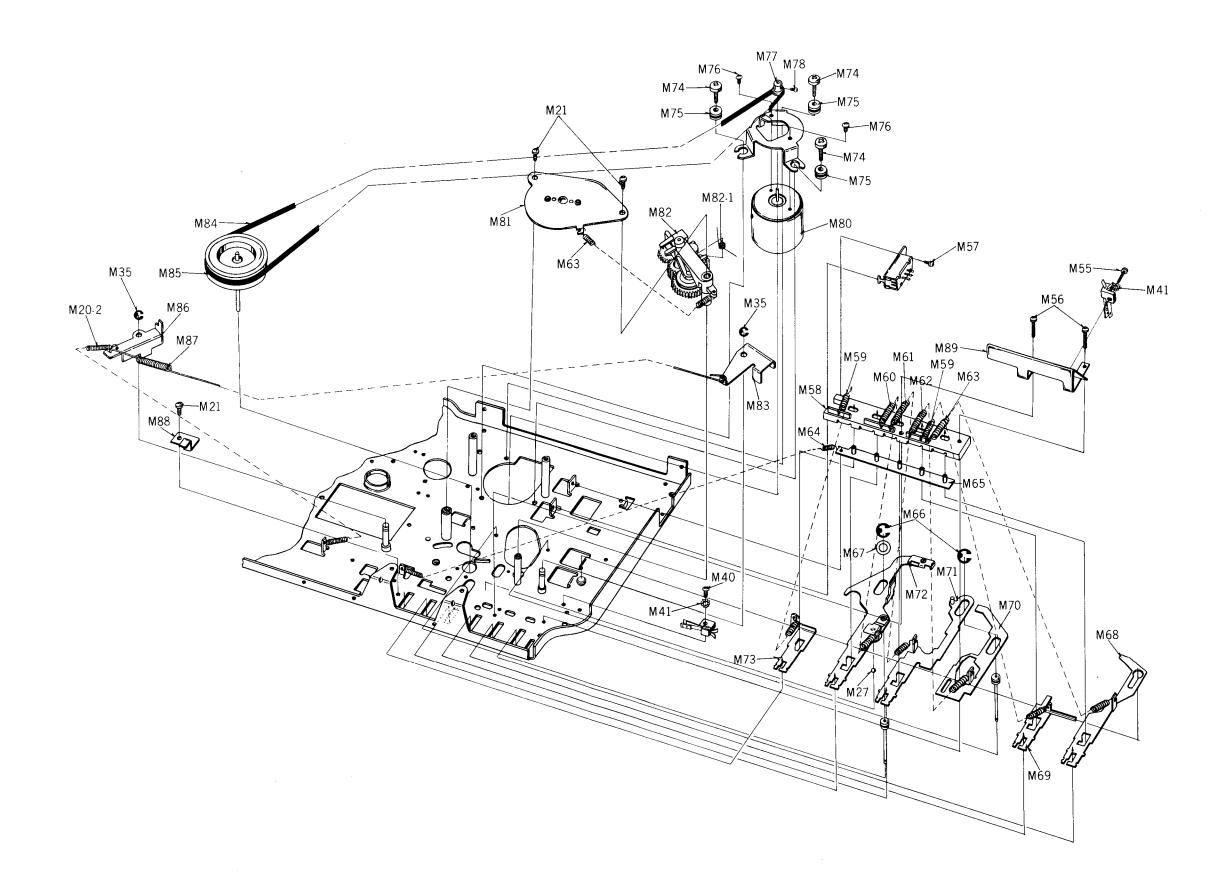
#### NOTE:

The circuit shown in green on the conductor side is +B circuit. Values indicated in  $\ \ \ \ \ \ \ \ \ \ \ \$  are DC voltages between the chassis and electrical parts.

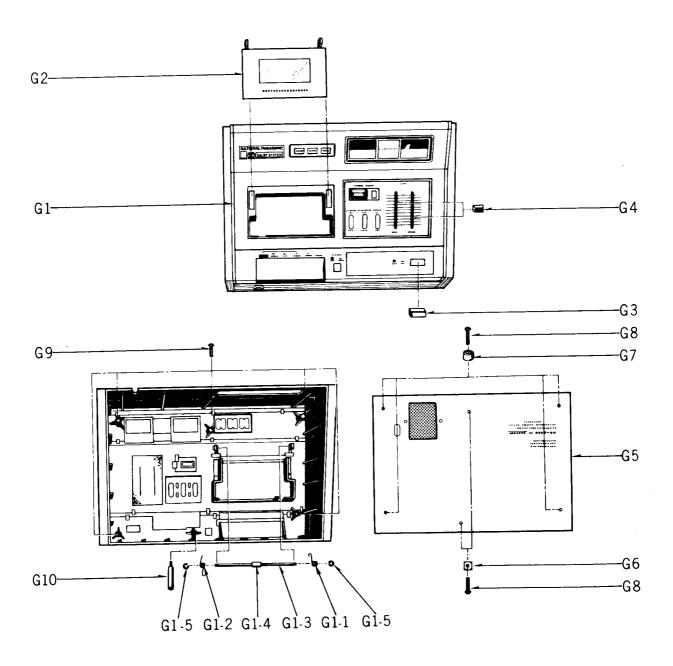
The upper values should be measured during recording and the lower values during playback.

# **EXPLODED VIEWS**





# **CABINET PARTS**



# REPLACEMENT PARTS LIST MODEL RS-263US NATIONAL PANASONIC



**RS-263US** 

#### NOTE:

- 1. Be sure to make your orders of Replacement Parts according to this List.
- 2. "x" in "Rank" Column indicates that the part are not supplyable.
- 3. "A, B and C" in "Rank" Column indicates the recommended stock of replacement parts. Refer to the recommended stock table on last page.
- 4. "★" in "Remarks" Column indicates New Parts.
- 5. "(ISO" in "Remarks" Column indicates ISO Screw or Nut.

#### NOTA:

- 1. Habrá que asegurarse que los pedidos de piezas de repuesto se hagan según esta lista.
- 2. "x" marcado en la columna "Rank", quiere decir que dichas piezas no pueden ser provistas.
- 3. "A, B y C" marcadas en la columna "Rank" indican el surtido que se recomienda tener de dichas piezas de repuesto.
- 4. "\* marcado en la columna "Remarks", quiere decir que las piezas son nuevas.
- 5. "(150)" marcado en la columna "Remarks", quiere decir que es un tornillo o tuerca "ISO".

#### NOTE:

- 1. Bien s'assurer de se conformer à la liste suivante pour les commandes de pièces de rechange.
- 2. "X", dans la colonne "Rank", indique qu'il n'est pas possible de fournir ces pièces.
- 3. "A, B et C", dans la colonne "Rank", indiquent le stock recommandé de pièces de rechange. Se reporter en dernière page au tableau des stocks/recommandés.
- 4. "★", dans la colonne "Remarks", indique les pièces nouvelles.
- 5. "(), dans la colonne "Remarks", indique une vis ou un écrou ISO.

#### HINWEIS:

- 1. Bestellen Sie Ihre Ersatzteile genau nach dieser Liste.
- 2. Mit "x" in der "Rank" Spalte aufgeführte Teile können nicht geliefert werden.
- 3. "A, B und C" in der "Rank" Spalte zeigt Ihnen den Vorrat der Ersatzteile an.
- 4. "★" in der "Remarks" Spalte bedeutet "neue Teile".
- 5. "(150" in der "Remarks" Spalte bedeutet ISO-Schraube oder Mutter.

#### 按:

- 1. 關於代用零件之訂購, 務請依照此表而行之爲荷。
- 2. 「等級」(Rank) 一欄中之"×"標記表示該零件無從供應。
- 3. 「等級」(Rank) 一欄中之"A,B,C"標記表示該零件有存貨,值得介紹。 請參照最後一頁的「值得介紹存貨表」。
- 4. 「備考」(Remarks) 一欄中之"★"形符號標記表示該零件爲新出品。
- 5. 「備考」(Remarks) 一欄中之"(豆)"符號標記表示國際標準化機構(ISO) 式螺絲或螺母。

Double	Def Ne	Description	D- I N	Pcs/ Price (F	Per Pce.)
Rank	Ref. No.	Description	Part No.	Set	Remarks
	t de la companya de l	MECHANICAL PARTS			
	N41			1	
	M1	Memory Tape Counter	QDC0041S	1	<b>★</b> (ISO)
A	M2	Counter Belt	QDB0124	1	RS-253S
С	M3	Tapping Screw ⊕3×6	XTV3+6	2	COMMON
×	M4	Counter Angle	QMAM005	1	*
C	M5	Screw ⊕3×5	XSN3 + 5S	4	COMMON (ISO
C	M6	Pause Switch Assembly	QXQM002		*
С	M7	Auto Stop Detecting Lever Spring	QBN1188	1	R0-409S
C	M8	Snap Washer	QWQ1124	· · · · · · · · · · · · · · · · · ·	RS-261US RQ-437S RS-261US
C	M9	Detecting Lever Assembly	QXLM005	1	
В	M9-1	Detecting Piece	QBJ1538	1	RQ-437S RS-261US
	• · · · ·				RS-261US
С	M10	Screw ⊖2×12	XSN2 12	4	соммон
С	M11	Spring Washer 2¢	XWA2B	3	,,
C	M12	Washer 2∳	XWE2	1	"
В	M13	Head Spring	QBC1103	1	RQ-209S, 437S RS-261US
C	M14	Head Spacer	QBJM003	1	RS-261US
С	M15	Screw ⊕2.6×6	XSN26⊹6	2	COMMON
С	M16	Lock Washer 2.6¢	XWC26B	2	,,
×	M17	Head Base Plate Unit	QXK1243	1	RS-261US- 281S
A	M18	Idler Lever Assembly	QMLM008	1	*
×	M18-1	Idler	QXI0050	1	RQ-437S RS-261US
C	M20	Auto Stop Drive Lever Assembly	QXL0568	1	*
- В	M20-1	Auto Stop Drive Pawl	QBJ1656	1	RQ-409S, 437S
C	M20-2	Auto Stop Spring	QBT1489M	1	RQ-437S RS-261US
C	M20-3	Stop Ring 2.5¢	XUC25FK	1	COMMON
C	M21	Sems Screw ⊕2.6×6	XYN26+C6	8	27
C	M22	Screw ⊕2.5×5	XSS26+5K	2	COMMON
C	M23	MECHA Panel Ornament	QMFM001	1	*
A	M24	Pressure Roller Lever Assembly	QXLM010	1	*

	D. C. P.	Description	Doub No.	Pcs/_	Price (Per Pce.)	Domonile o	
Rank	Ref. No.	Description	Part No.	Set		Remarks	
C	M25	Pressure Roller Spring	QBN1157	1		RQ-437S RS-261US	
С	M26	Pole-A	QMSM008	1		*	
В	M27	Steel Ball 2.5∳	QDK1012	3		RQ-437S RS-261US	
С	M28	Screw ⊕2.6×10	XSN26+10	3		COMMON	
×	M29	Upper Base Assembly	QXK1293	1		*	
C	м30	Lock Plate Spring	QBT1521	1		RS-261US, 281S	
C	M31	Eject Lever	QMLM012	1		*	
С	M32	Pause Lever	QMLM010			*	
C	M33	Stop Lever Spring	QBT1580	1		RQ-437S RS-261US	
С	M34	Cassette Retainer Assembly	QXQ0061	1		*	
C	M35	Stop Ring 3 $\phi$	XUC3FK	2		COMMON	
С	M36	Fiber Washer 4.2×9×0.5	QBK7005	1		**	
C	M37	Brake Spring	QBN1088	1		RQ-209S RS-254S	
 B	M38	Brake	QBJ2097	1		★	
C	M39	Pole-B	QMSM009	1		*	
	M40	. Screw ⊕2×4	XSN2 4	2		COMMON	
C	M41	Lock Washer 2¢	XWC2B	3		,,,	
<b>A</b>	M42	Supply Reel Table Assembly	QXP0320	1		RQ-437S RS-261US	
A	M43	Takeup Reel Table Assembly	QXP0395	1		*	
C	M44	Snap Washer	QBJ3220	3		RQ-409S RS-281S	
C	M45	Tapping Screw ⊕3 × 8	XTV3+8B	2		COMMON	
×	M46	Dolby Circuit Board Holding Angle	QTTM044S	1		<b>*</b> (ISO)	
С	M47	Stop Ring 1.5¢	XUC15FK	1	,	COMMON	
C	M48	Cassette Up	QBJM007	1	MI (Francisco) (10) (10) (10) (10) (10) (10) (10) (10	*	
C	M49	Cassette Up Spring	QBNM001	1		*	
C	M50	Stop Ring $2\phi$	XUC2FK	1		COMMON	
C	M51	Lid Hook Plate	QMAM009	1		*	
С	M52	Lid Hook Plate Spring	QBN1189	1		*	
C	M53	Hook Plate Holder Unit	QXEM001	1		*	

		D		Pcs/ Price (Per	Pce.)
Rank	Ref. No.	Description	Part No.	Set	Remarks
В	M54	Operation Button Assembly	QXBM006	1	*
С	M55	Screw ⊕2×8	XSN2÷8	1	COMMON
С	M56	Sems Screw ⊕2.6×10	XYN26+C10	2	,,
C	M57	Sems Screw ⊕3×6	XYN3 - C6S	1	COMMON (ISO
С	M58	Lever Guide	QBJ1657	1	RQ-437S RS-261US
С	M59	Stop Lever Spring	QBT1580	2	"
С	M60	Playback Lever Spring	QBT1536M	1	"
C	M61	Fast Forward Lever Spring-A	QBT1484M	1	"
C	M62	Fast Forward Lever Spring-B	QBT1485M	1	RQ-437S RS-261US
С	M63	Record Lever Spring	QBT1486M	1	,,
С	M64	Lock Plate Spring	QBT1521	1	RS-261US, 281S
C	M65	Lock Plate Unit	QXH0096	1	RQ-437S RS-261US
С	M66	Stop Ring 5¢	XUC5FK	2	COMMON
С	M67	Fiber Washer 6.2×11×1	QBK7130	1	COMMON
С	M68	Record Lever	QMLM008	1	*
C		Rewind Lever	QMLM009	1	*
C	M70	Fast Forward Lever-B	QML2118	1	RQ-409S RS-261US, 281S
С	M71	Fast Forward Lever Unit	QXL0481	1	RS-261US, 281S
С	M72	Płayback Lever Unit	QXLM009	1	*
С	M73	Stop Lever	QML1954	1	RS-281S
C	M74	Screw	QMS1833	3	RQ-437S RS-261US
C	M75	Motor Rubber Cushion	QBG1055A	3	,,
С	M76	Screw ⊕2.6 × 3	XSN26 + 3	2	COMMON
В	M77	Motor Pulley	QDP1378	1	RQ-437S RS-261US
C	M78	Motor Pulley Set Screw	XSN2 4-3	1	COMMON
×	M79	Motor Holding Angle	QMA1681	1	RS-261US, 281S
<b>A</b>	M80	Motor	QDM0980	1	RQ-436S RS-261US
×	M81	Flywheel Retainer Unit	QXH0095	1	RQ-437S RS-261US
	M82	Fast-wind Lever Assembly	QXL0451	1	RQ-437S RS-261US

		Description		Dout No.	Pcs/	Price (Pe	r Pce.)	Domonico	
Rank	Ref. No.	Descr	iption		Part No.	Set			Remarks
C	M82-1	Gear Lever Spring			QBN1196	1			RQ-437S RS-261US
С	M83	Record/Playback I	_ever-A		QMLM006	1			*
A	M84	Flywheel Belt			QDB0141	1			RQ-437\$ RS-261US
A	M85	Flywheel Assembly	/	<u>-</u>	QXF0063	1			<b>&gt;</b>
C	M86	Record/Playback I	_ever-B		QMLM007	1			*
C	м87	Record/Playback	Wire	—	QBNM002	1		·	*
C	M88	Lever Guide Holdin	ng Metal		QMA1697	1		4114	RS-261US, 281S
×	M89	Muting Switch Ang	gle		QTTM052S	1			<b>★</b> (ISO)
		RESIS							
В	R1,2,215,265	Carbon Resistor	10ΚΩ	1/4 W	ERD14VJ103	4			
В	R3, 4, 57, 58, 103 <sup>-</sup>	"	10Ω	1/4 W	ERD14VJ100	5			
В	l.	51, 52, 69, 70, 73,	74						
		79	100ΚΩ	1/4 W	ERD14VJ104	10			
В	R6, 12	"	100ΚΩ	1/4 W	ERD14TJ104	2			
В	R7,8,13,17,18.	21,45,46,101,211	.217,261,2	267					
		27	4.7 ΚΩ	1/4 W	ERD14VJ472	13			. ,
В	R9, 10	Carbon Resistor	100Ω	1/4 W	ERD14VJ101	2			
В	R14, 22	19	4.7 ΚΩ	1/4 W	ERD14TJ472	2			
В	R15, 16	,,	820Ω	1/4 W	ERD14VJ821	2			
В	R23	"	22ΚΩ	1/4 W	ERD14TJ223	1			
В	R24, 65, 66, 216, 266	,,	22ΚΩ	1/4 W	ERD14VJ223	5			
В	R25	Carbon Resistor	220 ΚΩ	1/4 W	ERD14TJ224	1			
В	R26	"	220 ΚΩ	1/4 W	ERD14VJ224	1			
В	R27, 28, 49, 50	,,	12ΚΩ	1/4 W	ERD14VJ123	4			
В	R29, 273	,,	680Ω	1/4 W	ERD14TJ681	2			
В	R30, 55, 56, 223	,,	680Ω	1/4 W	ERD14VJ681	4			
В	R31,32,67,68, 221,225,226	Carbon Resistor	8.2 ΚΩ	1/4 W	ERD14VJ822	7			
В	R33,34,41,42, 63,64	77	2.2 ΚΩ	1/4 W	ERD14VJ222	6			
В	R35, 36	77	470Ω	1/4 W	ERD14VJ471	2			
В	R37, 38, 206, 227, 236	79	180 ΚΩ	1/4 W	ERD14VJ184	5		and the second contract of the	

		No. Description		Dout No	Pcs/_	Price (Per Pce.)			
Rank	Ref. No.	Desci	ription		Part No.	Set	•		Remarks
В	R39, 40	Carbon Resistor	18ΚΩ	1/4 W	ERD14VJ183	2			
B	R43, 44	Carbon Resistor	180Ω	1/4 W	ERD14VJ181	2	· • . • . • . • . • . • . • . • . • . •		
В	R47, 48, 210,	,,	3.9 ΚΩ		ERD14VJ392	4			
 B	260 R53, 54, 231	"	2.7 ΚΩ		ERD14VJ272	3			
В	R61, 62, 220,	"	6.8ΚΩ		ERD14VJ682	4			
Б	R71, 72, 112,			1/4 W	ERD14VJ102	4			
	113	official control of the control of t							
В	R102	Carbon Resistor	39 ΚΩ	1/4 W	ERD14TJ393	1			
В	R110	Solid Resistor	270Ω	1/4 W	ERC12GK271	1			
В	R111	"	10Ω	1/4 W	ERC12GK100	1			
В	R151, 152	Carbon Resistor	150ΚΩ	1/4 W	ERD14TJ154	2			
В	R153, 154	**	1.2 ΚΩ	1 /4 W	ERD14TJ122	2			
					· 				
В	R155, 156	Carbon Resistor	8.2Ω	1/4 W	ERD14TJ8R2	2			
В	R202	**	68ΚΩ	1/4 W	ERD14VJ683	1			
В	R203,207,253. 257	77	47ΚΩ	1/4 W	ERD14VJ473	4			
В	R204, 254	77	1.5 ΚΩ	1/4 W	ERD14VJ152	2			
В	R205, 255	77	33 KΩ	1/4 W	ERD14VJ333	2			
	- · · · · · · · · · · · · · · · ·								
В	R208, 258	Carbon Resistor	120ΚΩ	1/4 W	ERD14VJ124	2		TO THE RESERVE OF THE PARTY OF	
В	R209, 259	***	1.8ΚΩ	1/4 W	ERD14VJ182	2			
В	R212,228,262.	"	470 ΚΩ	1/4 W	ERD14VJ474	4			
В	R213, 263	77	3.3 ΚΩ	1/4 W	ERD14VJ332	2		·····	
В	R214, 264	27	39 KΩ	1/4 W	ERD14VJ393	2			
В	R218, 268	Carbon Resistor	820ΚΩ	1/4 W	ERD14VJ824	2			
В	R219, 269	77	390 ΚΩ	1/4 W	ERD14VJ394	2			
В	R222	<b>77</b>	5.6 ΚΩ	1/4 W	ERD14VJ562	1			
В	R224, 274	2)	33ΚΩ	1/4 W	ERD14TJ333	2			
В	R229, 279	,,		1/4 W	ERD14TJ101	2		VA	
									<b></b> .
В	R230, 280	Carbon Resistor	2.2 ΚΩ	1/4 W	ERD14TJ222	2			
В	R232, 282	**	120Ω	1/4 W	ERD14TJ121	2			
B	R233	"	15ΚΩ	1/4 W	ERD14VJ153	1			

					Pcs/	Price (Per Pce.)	D	
Rank	Ref. No.	Descript	Part No.	Set		Remarks		
В	R234,235,284	R234,235,284 Carbon Resistor 270 KΩ		ERD14VJ274	3			
В	R252	"	68 KΩ 1/4 W	ERD14TJ683	1			
В	R256,277,286	Carbon Resistor	180 KΩ 1/4 W	ERD14TJ184	3			
В	R271,275,276	>>	8.2 KΩ 1/4 W	ERD14TJ822	3			
В	R272	**	5.6 KΩ 1/4 W	ERD14TJ562	1			
В	R281	23	2.7 KΩ 1/4 W	ERD14TJ272	1			
В	R283	**	15 KΩ 1/4 W	ERD14TJ153	1			
В	R285	Carbon Resistor 2		ERD14TJ274	1			
		_						
		VARIABLE RI	ESISTORS					
A	VR1, 2	Semi-fixed Variable R	esistor 10 KΩ (B)	QVL00AA00B14	2		RS-262US,275US	
A	VR3, 4	,,	20 KΩ (B)	EVLS3AA00B24	2		*	
A	VR5, 6	Variable Resistor	20 KΩ (A)	EVA72AA01A24	2		RS-262US	
A	VR7, 8	Semi-fixed Variable R	esistor 50 KΩ (B)	QVL00AA00B54	2		RS-270US,261US 715US	
A	VR9, 10, 102, 104	,	2 KΩ (B)	QVL00AA00B23	4		*	
	1.04							
A	VR101, 103	Semi-fixed Variable R	esistor 10ΚΩ (B)	EVL53AA00B14	2		*	
		CAPACIT	ORS					
C	C1, 2	Styrol Capacitor	470 pF	ECQS1471KZ	2			
В	C3,4,19,20,27,	28,29,30,35,36,37,38,4	19,50,51					
	02,07,00	Electrolytic Capacitor		ECEA25V3R3L	18			
В	C5, 6	,,	47μF	ECEA16V47L	2			
С	C9,10,151, 152,153,154	Ceramic Capacitor	1000 pF	ECKD05102MZ	6	-		
В	C11,12,201,20 255,258,262,	2,203,205,208,215,25 265	1,252,253,					
		Electrolytic Capacitor	10 <i>µ</i> F	ECEA16V10L	16			
С	C13, 14	Ceramic Capacitor	100 pF	ECCD05101K	2			
В	C15, 16	Electrolytic Capacitor	47 <i>μ</i> F	ECEA6V47L	2			
C	C17, 18	Mylar Capacitor	0.0012µF	ECQM05122KZ	2			
С	C21,22,25,26	Styrol Capacitor	560 pF	ECQS1561KZ	4			
	C23, 24	Mylar Capacitor	0.027 <i>µ</i> F	ECQM05273KZ	2			

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Rank	Ref. No.	Description	<u> </u>	Part No.	Set		Remarks
C	C31,32,43,44, 204,254	Ceramic Capacitor	47 pF	ECCD05470K	6		
В	C33, 34	Electrolytic Capacitor	220 <i>µ</i> F	ECEA16V220L	2		
В	C39, 40	,,	100 <i>µ</i> F	ECEA25V100L	2		
С	C41,42,47,48,	209, 218, 259, 268					
		Aluminum Capacitor	0.33 <i>µ</i> F	ECAG25ER33	8		
В	C45,46,61,62, 63,64,65,66	Electrolytic Capacitor	10 <i>μ</i> F	ECEA25V10L	8		
							·····
С	C53, 54	Mylar Capacitor	0.039 <i>µ</i> F	ECQM05393KZ	2		
С	C55, 56	<b>19</b>	0.0027 <i>μ</i> F	ECQM05272KZ	2		
С	C57, 58	Styrol Capacitor	820 pF	ECQS1821KZ	2		
С	C59, 60	Mylar Capacitor	0.0018 <i>µ</i> F	ECQM05182KZ	2		
С	C69, 70, 206, 256	"	0.033 <i>µ</i> F	ECQM05333KZ	4		
С	C101	Mylar Capacitor	0.015 <i>μ</i> F	ECQM1153KZ			
C	C102, 103	Ceramic Capacitor	27 pF	ECCD05270K	2		
c	C104	Mylar Capacitor	0.018μF	ECQM05183KZ	1		
c	C105	,,	0.1 <i>μ</i> F	ECQM05104KZ			
c	C106	Styrol Capacitor	2200 pF	ECQS1222KZ	1		and the second
	0100						
В	C110,111,113,	Electrolytic Capacitor	220µF	ECEA25V220L	4		
В	C115	,,	100μF	ECEA25V1000L	1		
В	C116	"	470μF	ECEA16V470L	1		management of the state of the
C	C207, 257	Mylar Capacitor	0.0047μF	ECQM05472KZ	2		
В	C210, 260	Electrolytic Capacitor	47μF	ECEA10V47L	2		
C	C211, 261	Styrol Capacitor	270 pF	ECQS1271KZ	2		
С	C213,217,263, 267	Aluminum Capacitor	0.1 <i>µ</i> F	ECAG25ER1	4		
С	C214, 264	Styrol Capacitor	680 pF	ECQS1681KZ	2		
C	C216, 266	Mylar Capacitor	0.047µF	ECQM05473KZ	2		
С	C219, 267	Ceramic Capacitor	0.01 <i>µ</i> F	ECCD05103P	2		
		TRANSIST	DRS				
A	Tr1, 2, 3, 4	Transistor		2SC1327(S,T,U)	4		*
A	Tr5,6,7,8,9,10, 212,213,214,	11,12,201,202,203,204,2 216	06,211,				
		<b>&gt;</b>		2SC828(R,S)	18		RS-270U\$275US 715U\$

				Pcs/ Price (Per Pce.	)
Rank	Ref. No.	Description	Part No.	Set	Remarks
A	Tr13, 14, 15	Transistor	2SC1347(Q,R)	3	*
A	Tr205, 215	"	2SA564(Q,R)	2	RS-257S, 281S, 282S, 818S
A	FET1, 2	"	2SK37(K)	2	*
		DIODES			
A	D1,2,204,214	Diode	OA90	4	COMMON
A	D3 4	,,	IS1850	2	RQ-437S RS-275US
A	D201, 211	"	RD7A	2	*
A	D202,203,205, 212,213,215	33	IS1211	6	RS-253S, 257S, 267S, 272US
		THERMISTORS			
В	TH1, 2	Thermistor	QVM302A	2	RS-763S, 820
		TRANSFORMERS			
A	T1, 2	Output Transformer	QLA0349	2	RS-270US,275US 763US,796US
A	Т3	Power Transformer	QLPM0308	1	*
		COILS			
A	L1, 2	Trap Coil	QLHM2001	2	*
A	L3. 4, 5, 6	Choke Coil	QLH2008	4	RS-262US,270US 740US
A	L7	Oscillator Coil	QLB0153	1	*
A	L101, 102	Low Pass Filter	QLH2021	2	*
		SWITCHES			
A	\$1.2	Slide Switch (Record/Playback Selector)	QSS1148A	2	*
A	S3, 10	Lever Switch	QST0033SB	2	*
A	S4	Push Switch (Power)	ESB1130D\$	1	★ (Iso
A	S5	Lever Switch (Memory Rew.)	QST0016SB	1	RS-275US
A	\$6	Leaf Switch (Motor ON/OFF)	QSB0169A	1	RS-256US,262US 803US
Α	S7	Leaf Switch (Rewind Switch)	QSB0170A	1	RS-253S, 254S, 270US
	\$8	Memory Counter Switch	with M1	(1)	
A	\$9	Stop Switch	QSS1105	1	RS-275US
A	S11	Rotary Switch (Voltage Selector)	QSR0005B	1	COMMON
A	S12	Muting Switch	QSBM001	1	*

D 1-	Def. No.	Description	Danit Ma	Pcs/ Pri	ice (Per Pce.)	
Rank	Ref. No.	Description	Part No.	Set	Remarks	
		ELECTRICAL PARTS				
Α	E1	Record/Playback Head	QWY4107Z	1	*	
A	E2	Erase Head	WY0242Z	1	*	
С	E3	Jack Board	QJTM008	1	*	
В	E4	M3 Jack	QJA0115	2	COMMON	
A	E5	Pilot Lamp	XAMQ18P	5	*	
C	E6	2P Lug Terminal	QJT2012	1	*	
В	E7	Headphone Jack	QJA0228	1	RS-270US,272 715US	2US
В	E8	AC Power Cord	QFC1016A	1	COMMON	
C	E9	Cord Bushing	QTD1126A	1	"	
C	E10	Switch Guide	QBJ2133	1	*	
A	E11	VU Meter	QSL1018	2	*	
C	E12	Meter Holder	QTQM004	1	*	
В	E13	DIN Jack	QJS0723S	1	RS-262US, 272US	<b>50</b>
C	E14	4P Terminal Board	QJT4009	2	COMMON	
С	E15	Fuse Holder	QTF1032	1	"	
С	E16	Reflection Plate	QBJ2141	1	*	
С	E17	Screw	XSNQ0004S	22	COMMON	
A	E18	See-Saw Knob (Blue)	QGT2122AS	1	*	
A	E19	See-Saw Knob (Yellow)	QGT2122BS	1	*	
A	E20	See-Saw Knob	QGTM013S	1	*	
A	E21	Relay	QSK0121	1	RS-270Us	
A	E22	Fuse 0.5 A	XBA1E05NR1	1	COMMON	
		CABINET PARTS				
В	G1	Main Body Case Assembly	QYBM0018S	1	<b>★</b> ( <u>is</u>	<u></u>
В	G1-1	Cassette Lid Spring-R	QBNM003	1	*	
В	G1-2	Cassette Lid Spring-L	QBNM004	1	*	
С	G1-3	Cassette Lid Shaft	QKQM033	1	*	
C	G1-4	Cassette Lid Shaft Spacer	QKQM038	1	*	

Rank	Ref. No.	Description	Part No.	Pcs/_	Price (Per Pce.)	Remarks	
				Set		Rema	irks 
С	G1-5	Stop Ring 3 $\phi$	XUC3FT	2		COMMON	
A	G2	Cassette Lid Assembly	QYAM0004	1		*	
A	G3	Power Switch Button	QYTM007	1		*	
A	G4	Volume Knob	QYT0215	2		RS-262US	,275US
C	G5	Bottom Board Assembly	QYCM0010	1		*	
C	G6	Squre Washer	QWQ1115	2		RS-262US	
С	G7	Rubber Foot	QKA1050A	4		RS-256US 280S	,262US
C	G8	Screw ⊕3×12	XSN3+12	6		COMMON	(ISO
C	G9	Screw ⊕3×8	XYN3+C8RS	5		,,	(ISO
С	G10	Chassis Pole	QHGM006S	1		*	(ISO)
		ACCESSORIES	RP8125				
A	A1	Connection Cord-G	(QEB0060P)	2		COMMON	
8	A2	AC Plug Adaptor	QJP0603S	1		**	ISO
A	A3	Cassette Tape	QFTITCJNAQZ	1		RS-275US	; 
B	A4	Instruction Book	QQT1788	1		*	
		PACKINGS					
С	P1	Inside Carton	QPNM037	1		*	
C	P2	Inner Cushion-L	QPNM031	1		*	
C	Р3	Inner Cushion-R	QPNM032	1		*	
С	P4	Dust Cover	XZB50×60A05	1		COMMON	
C	P5	Accessory Box	QPW1125	1		RQ-209S RS-261US	,262US

# RECOMMENDED STOCK OF REPLACEMENT PARTS

D. ale of Deal	Estimated Selling Q'ty of Tape Recorder Set							
Rank of Part	Less 50 than	100	300	500	1,000	2,000		
A rank Parts	2	5	15	20	40	80		
<b>B</b> rank Parts	1	2	5	10	20	40		
C rank Parts	0	1	3	5	10	20		